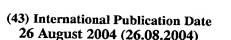
0 1 JUL 2005 Rec'd PCT/PTO

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization International Bureau





. I deri enimenti il elekte komi erkik erkik erkik kik olik erkik kolik kolik kolik ileki ileki erkik olik kik

PCT

(10) International Publication Number WO 2004/072170 A2

(51) International Patent Classification7:

C08L

(21) International Application Number:

PCT/US2004/003499

- (22) International Filing Date: 6 February 2004 (06.02.2004)
- (25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data: 60/445,638

6 February 2003 (06.02.2003)

- (71) Applicant (for all designated States except US): DOW GLOBAL TECHNOLOGIES INC. [US/US]; Washington Street, 1790 Building, Midland, MI 48674 (US).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): GAN, Joseph [FR/FR]; 100, Route du Polygone, Strasbourg, F-671000, Bas-Rhin (FR). KING, Bruce [BE/US]; 1415 West Carpenter Street, Midland, MI 48640 (US). REGO, Jose, M. [ES/NL]; Vlasstraat 31, Heikant, Zeeland 4566BC (NL). YOUNGSON, Chris, G. [US/US]; 1413 Whitehall Street, Midland, MI 48642 (US).
- (74) Agent: MORSE, Jonathan, W.; The Dow Chemical Company, Intellectual Property Section, P.O. Box 1967, Midland, MI 48674-1967 (US).

- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

without international search report and to be republished upon receipt of that report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: HALOGEN FREE IGNITION RESISTANT THERMOPLASTIC RESIN COMPOSITIONS 4 -

(57) Abstract: The present invention is a halogen-free ignition resistant polymer composition comprising: A) a thermoplastic polymer or polymer blend, B) a modified multi-functional epoxy resin containing from 0-20 wt. percent residual epoxy groups, based on the total weight of the epoxy resin, and C) a phosphorus containing compound. The use of a modified multifunctional epoxy compound having from 0-20 weight percent residual epoxy groups, enhances the flame retardancy of the thermoplastic polymer, and can increase the compatibility of the epoxy resin with the thermoplastic polymer through the use of the modified functionalities, without causing black specks in the final product. It has been additionally discovered that modified multi-functional epoxy resins can also contribute to improved mechanical properties, melt flow rate and processability.

